

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 3 and 12 are rejected under 35 U.S.C. 103(a) over the patent to Adachi, et al.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent to Adachi, et al in view of the patent to Rich.

At the same time the Examiner indicated that claims 4-9 and 11 are allowed.

The Examiner's indication of the allowance of the above mentioned claims has been gratefully acknowledged. In connection with this indication, the allowed claims have been retained as they were, with the exception of a minor correction required by the Examiner. Claim 1, the broadest claim on file, has been amended to make the same correction (deletion of reference numeral 52).

After carefully considering the Examiner's grounds for the rejection of the claims over the new prior art applied by him, claim 1, the

broadest claim on file, has been retained as it was. It is respectfully submitted that the new features of the present invention which are defined in claim 1, in particular the pressing of all the winding sides that are inserted into each slot into a slot shape 119 in a tool, and plastically reshaping them before being inserted into the slot to permanently assume the slot shape, clearly and patentably distinguish the present invention from the prior art.

Turning now to the prior art and in particular to the patent to Adachi, it is respectfully submitted that this reference corresponds to the Japanese published, non examined patent application 9-103052 which is discussed in the Background of the Invention section of the present application.

The reference discloses a method for producing a magnetically excitedly core 50 or 51 (laminated assembly and stator core respectively) with a core winding 52 (stator coil assembly) for an electrical machine. In accordance with the method disclosed in this reference a substantially cuboid-shape core 50 is produced in one method step with slots 51a which extend parallel on one side. In another method step the core winding 52 is inserted in the slots 51a with the winding sides (not shown in the reference). Then in a subsequent method step the core 50 or 51 together with the core winding 52 is reshaped in a cylindrical shape in correspondence with the

radially inwardly oriented slots 51a, as explained in column 2, lines 50-67 and shown in Figures 1-3.

The method disclosed in this reference however does not have the new features of the present invention as defined in claim 1.

In the Office Action the Examiner indicated that while the patent to Adachi, et al did not teach the tool for plastically reshaping of winding sides before being inserted into the slots to permanently assume the slot shape, the core winding of the reference has been already preformed, (plastically reshaped) in the slot shape in a tool and does not need further forming within the slots (which is equivalent with permanently assumed slot shaped) before being inserted in the slot, with reference to column 2, lines 50-67. However, the reference discloses only one feature which is also required for the present invention, namely the deformation of the stator winding 52 in a general flat shape, which must not be reshaped again in the grooves or slots 51a, as clearly explained in column 2, starting line 57 of the reference. The winding 52, before the insertion in the slots 51a, is however reshaped so that the winding sides are arranged at the right position, for the insertion, as explained in column 2, starting from line 60. This means that the winding sides are adjusted so that at least each individual winding side must pass between the toothed heads, or in other words between the

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expanded two ends which in Figure 2 form a slot and face away from the yoke. This means that the winding sides are adjusted to the groove opening (two dimensions). This however is different from the adjusting to a slot shape, which extends in three dimensions and therefore forms a spacial structure.

The patent to Adachi does not disclose any concrete measures for obtaining a high conductor density in the slots 51, which can correspond to the new features of the present invention as defined in claim 1. It is believed that the Examiner's interpretation of the patent to Adachi can be equated only with a hindsight analysis, resulting from the Examiner's familiarization with the subject matter of the present application and the novel features of the invention disclosed in the present application.

When the method is performed in accordance with the present invention as defined in claim 1, the conductor density in the slots or the slot field factor is increased. For this purpose all winding sides 36, each insertable in a corresponding slot 32, before the insertion in the slots 32 are pressed in a pressing tool 44 to obtain a slot shape 119 and plastically reshaped to permanently assume the slot shape 119. Such a method step is not disclosed in the patent to Adachi, either directly or implicitly, and can not be considered as obvious from this reference. The patent to Adachi

discloses that a conventional wire is bent for forming a winding with winding sides, which as before has the same original wire cross-section. From these features it is not possible to derive that already available winding sides, each inserted in a corresponding slot, are pressed, before the insertion into the slot in a tool into a slot shape and plastically reshaped to permanently assume the slot shape.

It is therefore believed to be clear that the new features of the present invention which are now defined in claim 1 are not disclosed in the patent to Adachi.

The Examiner rejected the original claims as being obvious over this reference. However, a person of ordinary skill in the art would not arrive from the teaching of the patent to Adachi to the present invention as defined in claim 1 as a matter of obviousness. Instead, he has to fundamentally modify the disclosure of the Adachi reference, in particular by including into it the new features of the present invention as defined in claim 1. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

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This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in *Randol and Redford* (165 USPQ 586) that

Prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Also, as explained herein above, the present invention as defined in claim 1 provides for the highly advantageous results. It is well known that in order to support a valid rejection the art must also suggest that it would accomplish applicant's results. This was stated by the Patent Office Board of Appeals, in the case *Ex parte Tanaka, Marushima and Takahashi* (174 USPQ 38), as follows:

Claims are not rejected on the ground that it would be obvious to one of ordinary skill in the art to rewire prior art devices in order to accomplish applicants' result, since there is no suggestion in prior art that such a result could be accomplished by so modifying prior art devices.

In view of the above presented remarks and amendments, it is believed that claim 1 should be considered as patentably distinguishing over the art and should be allowed.

The patent to Rich applied by the Examiner also does not teach the new features of the present invention as defined in claim 1, and therefore any detailed comments thereon would be superfluous.

The Examiner's statement on page 3 with respect to claim 3 is not conclusive, since obviously claim 3 further defines the feature of claim 1. The slot shape of claim 3 is the slot shape of claim 1, or in other words of a tool and not of a stator core 24.


It is therefore respectfully requested to allow claim 1 together with the dependent claims which depend on it and share its presumably allowable features.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be

helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,

  
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